AC charging controller - EM-CP-PP-ETH - 2902802

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EV charge control is used to charge electrical vehicles on the 3-phase AC mains power supply according to IEC 61851-1 Mode 3. All necessary control functions are integrated. Additional functions are available for various charging applications.

RoHS

Key Commercial Data

Packing unit	1 pc
GTIN	4 046356 681032
GTIN	4046356681032

Technical data

Product definition

Type	in housing
Application	AC charging controller for commercial applications (EU)
Standards/regulations	IEC 61851-1
Charging standard	Type 2
Charging mode	Mode 3, Case B + C
Number of supported charging points	1
Locking release in the event of mains failure	With EM-EV-CLR-12V locking release module (Order No. 2903246) as an option
Conformance	CE-compliant

Dimensions

Height	90 mm
Width	71.6 mm
Depth	61.00 mm

Ambient conditions

Ambient temperature (operation)	-25 °C ... 60 °C
Ambient temperature (storage/transport)	-40 °C ... 85 °C
Permissible humidity (operation)	30 % ... 95 % (non-condensing)

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Technical data

Ambient conditions

Degree of protection	IP20

Inputs

Number of digital inputs	4
Frequency range	50 Hz ... 60 Hz
Nominal current I_N	≤ 8 mA
Nominal input voltage U_N	24 V
Input voltage range U1	-3 V ... 5 V (Off)
Input voltage range U2	15 V ... 30 V (On)

Switching outputs

Control of charging contactor	Relay output $C_{1,2}$
Minimum switching capacity	1500 VA
Maximum switching voltage	250 V AC (External supply)
Max. switching current	2 A
Control of locking actuator	Relay output $R_{1,3}$ and $R_{2,4}$
Minimum switching capacity	180 VA
Maximum switching voltage	30 V AC/DC (External supply)
Max. switching current	2 A

Digital outputs

Control of additional switching functions	Relay output $V_{1,2}$
Maximum switching voltage	250 V AC
Max. switching current	2 A
Control of additional functions	4 digital outputs
Connection technology	Screw connection
Maximum output voltage	30 V
Maximum output current	0.2 A (Total current for all outputs; internally supplied)
Maximum output current per channel	0.6 A (Per output; externally supplied)

RS-485 data interfaces

Number of interfaces	1
Bus system	RS-485
Connection method	Screw connection
Number of supported devices	1
Transmission speed	9.6 kbps (Standard)
	2.4 kbps ... 19.2 kbps (adjustable)
Data flow control/protocols	Modbus/RTU (slave)

Ethernet data interfaces

Number of interfaces	1
Bus system	RJ45
Connection method	RJ45 jack

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Technical data

Ethernet data interfaces

Transmission speed	10/100 Mbps
Transmission length	max. 100 m (with shielded, twisted-pair data cable)
Protocols supported	Modbus/TCP

Connection data

Connection method	Screw connection
Conductor cross section flexible	0.2 mm² ... 2.5 mm²
Conductor cross section solid	0.2 mm² ... 4 mm²
Conductor cross section AWG	24 ... 12

Device supply

Supply voltage	230 V
Supply voltage range	110 V AC ... 240 V AC (nominal voltage range)
	95 V AC ... 264 V AC
Max. current consumption	40 mA
Nominal power consumption	< 1 W (No-load)
Frequency range	45 Hz ... 65 Hz

EMC data

Electromagnetic compatibility	Conformance with EMC Directive 2004/108/EC
Noise emission	EN 61000-6-3
Noise immunity	EN 61000-6-2
Low Voltage Directive	Conformance with LV directive 2006/95/EC
Housing	DIN 43880

Mounting

Mounting position	any

Environmental Product Compliance

China RoHS	Environmentally Friendly Use Period = 50 years
	For details about hazardous substances go to tab “Downloads”, Category “Manufacturer's declaration”

Drawings

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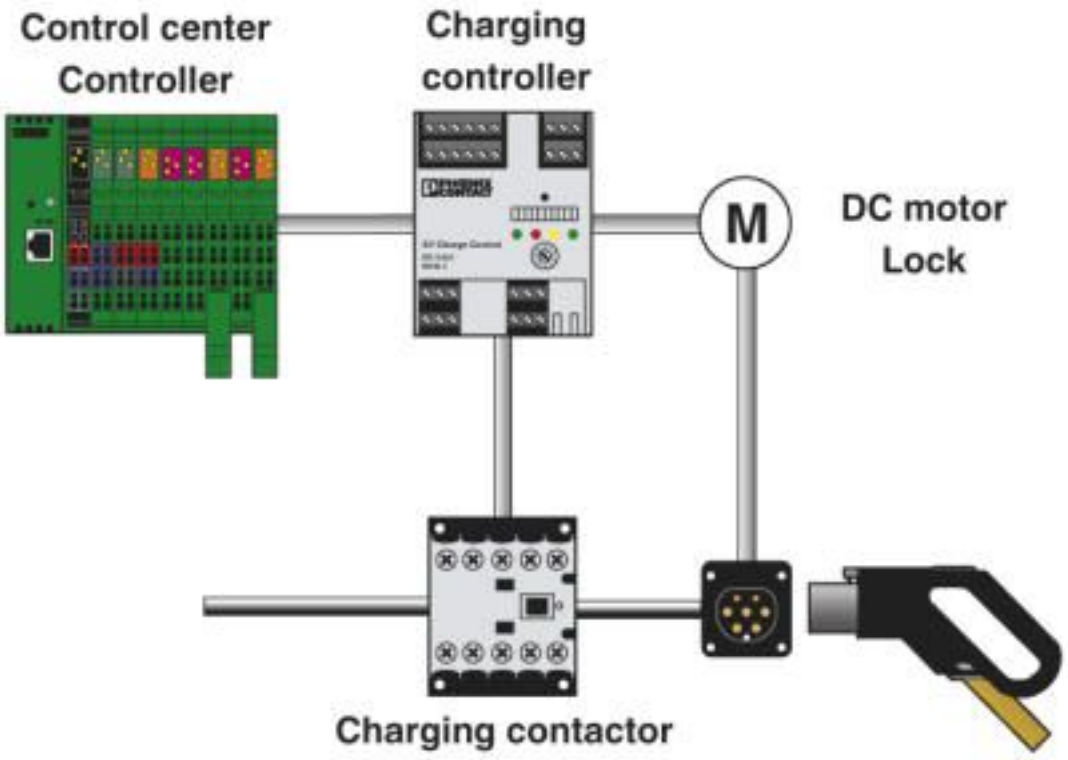
Application drawing



EV Charge Control interacting with a central controller

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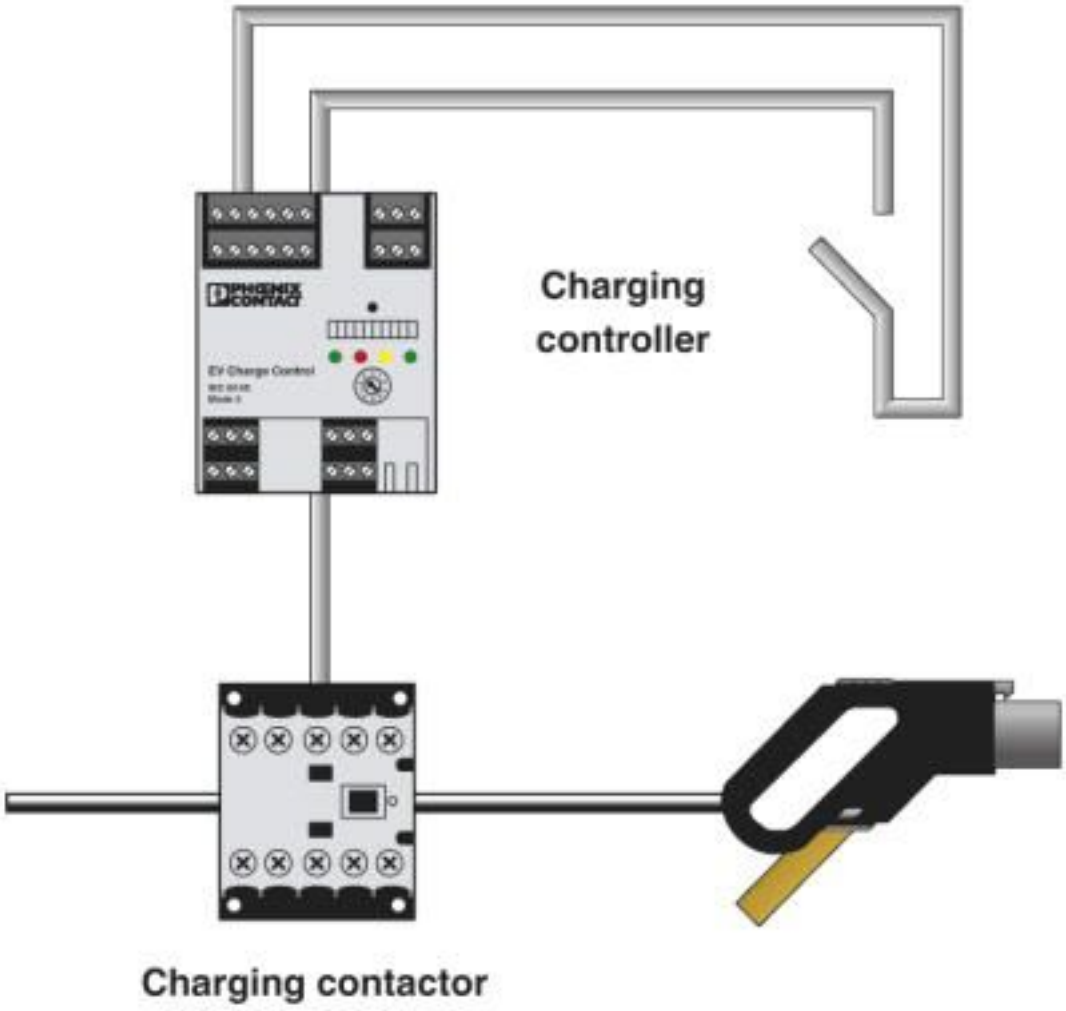
Application drawing



Simple charging point with permanently connected cable

Classifications

eCl@ss

eCl@ss 10.0.1	27144703
eCl@ss 11.0	27144703
eCl@ss 4.0	27210900
eCl@ss 4.1	27371100
eCl@ss 5.0	27242700
eCl@ss 5.1	27242700
eCl@ss 6.0	27242200
eCl@ss 7.0	27242207
eCl@ss 8.0	27242207
eCl@ss 9.0	27144703

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Classifications

ETIM

ETIM 3.0	EC001505
ETIM 4.0	EC001599
ETIM 5.0	EC001413
ETIM 6.0	EC002889
ETIM 7.0	EC002889

UNSPSC

UNSPSC 6.01	30211916
UNSPSC 7.0901	39121535
UNSPSC 11	39121535
UNSPSC 12.01	39121535
UNSPSC 13.2	39121801
UNSPSC 18.0	39121801
UNSPSC 19.0	39121801
UNSPSC 20.0	39121801
UNSPSC 21.0	39121801

Accessories

Accessories

AC charging cable

AC charging cable - EV-T2G3C-3AC32A-5,0M6,0ESBK01 - 1627355

AC charging cable with vehicle charging connector and open cable end, with protective cap, Housing color black-gray, for charging electric vehicles (EV) with alternating current (AC) via type 2 vehicle charging inlets, for installation at charging stations for electromobility (EVSE), Type 2, IEC 62196-2, 32 A / 480 V (AC), C-Line, “PHOENIX CONTACT” logo, cable: 5 m, black, straight

Infrastructure socket outlet

Socket Outlet - EV-T2M3SE12-3AC32A-0,7M6,0E10 - 1405214

Socket Outlet, rear protective cover screw connection, For charging electric vehicles (EV) with alternating current (AC), Compatible with infrastructure charging plugs, Type 2, IEC 62196-2, 32 A / 480 V (AC), Single wires, length: 0.7 m, Locking actuator: 12 V, 4-position, Rear panel mounting, Generation 1, “PHOENIX CONTACT” logo

Parameterization memory

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Accessories

Program / configuration memory - SD-FLASH-2GB-EV-EMOB - 1624092

Program and configuration memory for storing the application program and other files in the file system of the PLC, plug-in, 2 GB with license key for the function block libraries for E-Mobility

Power meter

Measuring instrument - EEM-EM357 - 2908588

Three-phase power meter for active power measurement with direct measurement in networks of up to 500 V / 80 A, with S0 output, with digital input and RS-485 interface, certified in accordance with the MID directive

Residual current monitoring module

Differential current monitoring - EV-RCM-C1-AC30-DC6 - 1622450

The residual current module is used for AC and DC residual current detection in AC charging points. The higher-level safety equipment (e.g., residual current circuit breaker) is protected against potential DC residual currents. A 1 or 2-channel product version is available.

Differential current monitoring - EV-RCM-C2-AC30-DC6 - 1622451

The residual current module is used for AC and DC residual current detection in AC charging points. The higher-level safety equipment (e.g., residual current circuit breaker) is protected against potential DC residual currents. A 1 or 2-channel product version is available.

Voltage monitoring relay

Voltage monitoring device - EM-EV-CLR-12V - 2903246

The EV Charge Lock Release monitors the 12 V operating voltage of the electrically driven plug locking actuator, routes locking and unlocking signals, and sends an unlocking pulse to the actuator when the operating voltage fails.

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